

REMARKS

Claims 1, 3 – 9 and 11 – 17 are currently pending in this application.

Claim Rejections – 35 U.S.C. §112

The Action rejected claims 1, 3-9 and 11-17 under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The lower power level recited in the claims was objected to as failing to have support in the specification. The lower power level is supported in the published application in paragraph [0011] (which corresponds to paragraph [0015] of the substitute specification submitted with the application on January 18, 2006). As shown below, paragraph [0011] recites “[t]his measure enables the operation of the internal combustion engine at a lower power level and permits use of the vehicle despite a defective free engine clutch.”

[0011] In the device according to the invention, when an actual value, which points to a defective free engine clutch and which is defined as a limit value, is exceeded, the controller automatically transfers to an emergency program. This measure enables the operation of the internal combustion engine at a lower power level and permits use of the vehicle despite a defective free engine clutch.

Accordingly, withdrawal of the § 112 rejection of claims 1, 3-9 and 11-17 is respectfully requested.

Claim Rejections – 35 U.S.C. §103

Claims 1, 3-8, 11-15, and 17 were rejected under 35 U.S.C. §103 as unpatentable over the combination of JP 62-035154 to Kadota et al. in view of JP 2003/184682 to Inada and further in view of US 2002/0029104 A1 to Amisano et al.

Claim 1 recites a power transmission drive including a synchronous drive for an internal combustion engine with which a rotating angle between a driven member and a drive member can be detected. A member of the power transmission drive includes an electronic controller which interacts with a control system of the internal combustion engine. A sensor, comprising a transducer, detects an oscillating angle deviation, a rotating angle deviation, an irregularity in RPM, or a correcting movement between the driven member and the drive member and sends a signal to the controller which calculates a control parameter. Upon detection of a defined limit value being exceeded, the controller initiates an emergency program that enables operation of the internal combustion engine at a lower power level. A free engine clutch is allocated to the driven member or the drive member and protects the power transmission drive for an accelerated angular velocity of the power transmission drive. The controller is provided with a fault memory that is adapted to detect both limit value-exceeding measurement values and measurement values that correspond to a tolerance array set for the defined limit value, for predicting an imminent failure of the free engine clutch.

Kadota et al. disclose a control device for an engine having an engine limiting portion 51b limiting an increase in output of an engine. Kadota et al. fail to disclose initiating an emergency program to run at “a lower power level.” Applicant continues to traverse the misapplication of this reference as disclosing this feature.

Inada is cited only as teaching a fuel injection pump with a free engine clutch to prevent reverse rotation. The Action admits there is no suggestion of using a fault memory that is adapted to detect both limit value-exceeding measurement values and measurement values that correspond to a tolerance array set for the defined limit value, for predicting an imminent failure of the free engine clutch in either Kadota et al. or Inada, and cites Amisano et al. as disclosing this feature.

Amisano et al. disclose a memory for storing a number of different values and functions but fail to disclose the memory as recited in claim 1. Amisano et al. disclose a memory within the electronic central control unit 29 that is capable of storing values defining a transmissibility function $FT(C_R)$ of a clutch for determining the reference position signal P_{RIF} indicating the position assumed by a control lever of a clutch. See paragraph [0041]. Amisano et al. also disclose a flow computing circuit that employs a table stored in a memory of the control device. The table contains a number of numeric values defining a function obtained by measuring nominal fluid flow supplied by a solenoid valve to an actuator. See paragraph [0048]. A pressure estimating circuit also uses a table stored in a memory of control device 34 and contains a signal indicating the estimated pressure

at the output of the solenoid valve. See paragraph [0057]. The memory stores a number of pairs of values relating to a respective position of the control lever. Amisano et al. provide a memory for storing a table for a number of values and functions. The values and functions stored in the table of Amisano et al. relate to the solenoid valve and control lever of the clutch. Amisano et al. fail to disclose a controller with a fault memory that is adapted to detect both limit value-exceeding measurement values and measurement values that correspond to a tolerance array set for the defined limit value for predicting an imminent failure of the free engine clutch. Accordingly, even if the references are combined as suggested in the Action, the combination still lacks all of the features recited in claim 1. Withdrawal of the §103 rejection of claim 1 is therefore respectfully requested.

Claims 2-8, 11-15, and 17 depend from claim 1 and should be patentable over Amisano et al. for the reasons noted above in connection with claim 1.

Claim 9 was rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. in view of Inada and Amisano et al., and further in view of JP 62-180157 to Inagaki et al. Applicant respectfully traverses this rejection.

Claim 9 depends from claim 1 and should be similarly patentable for the reasons noted above in connection with claim 1. While Inagaki et al. is cited as teaching a controller that sends an optical signal if an optical angle deviation or rotation angle deviation exceeds a limit value, it does not address the deficiencies

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noted above with respect to Amisano et al. Accordingly, withdrawal of the § 103 rejection of claim 9 is respectfully requested.

The remaining claims depend directly or indirectly from claim 1 and should be similarly patentable.

Claim 16 was rejected under 35 U.S.C. § 103 as unpatentable over the combination of Kadota et al. in view of Inada, Amisano et al. and further in view of U.S. 2004/0251758 to Wilmore. Applicant respectfully traverses this rejection.

Claim 16 depends from claim 1 and should be patentable for the reasons noted above in connection with claim 1. Wilmore is cited as teaching a starter generator which can be run in both the starting mode and the generator mode. However, this reference is silent with respect to the deficiencies of Amisano et al. Accordingly, withdrawal of the § 103 rejection of claim 16 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place the present application in condition for allowance, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience in order to address any such matters.

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In view of the foregoing amendments and remarks, Applicant respectfully submits that the present application, including claims 1, 3 – 9, and 11 – 17, is in condition for allowance, and a Notice to that effect is respectfully requested.

Respectfully submitted,

Tino Hänsel

By /Randolph J. Huis/
Randolph J. Huis
Registration No. 34,626
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
RJH/TPG